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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/727,753

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Johann Meseth

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LERNER GREENBERG STEMER LLP
P O BOX 2480
HOLLYWOOD, FL 33022-2480

EXAMINER

GREENE, DANIEL LAWSON

ART UNIT

PAPER NUMBER

3694

MAIL DATE

DELIVERY MODE

10/30/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/727,753	Applicant(s) MESETH, JOHANN	
	Examiner DANIEL L. GREENE	Art Unit 3694	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. Claims 1 and 3-5 are pending. Applicants Response received 7/7/2008 is acknowledged. Applicant has not amended the claims, merely argued against the contentions set forth in the previous Office action mailed 4/4/2008.

Response to Arguments

2. Applicant's arguments filed 7/7/2008 have been fully considered but they are not persuasive.

3. Applicant's arguments are unpersuasive as applicant has not shown that the references do not teach what the examiner has stated they teach, nor has applicant shown that the examiner's reasoning for and manner of combining the teachings of the references is improper or invalid.

4. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In this case, the Examiner has relied upon any of Nissel (German 2618108A1), JP0000550319AA to Itoya et al. or U.S. Patents 4,304,198 to Stiefel, 4,801,424 to Schweiger, or 5,122,333 to Larsen for the teachings of directing the effluent of a pipe in the direction of the horizontal of the fluid in which it terminates for the benefits gained

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thereof, for example, thermal mixing, moving water in a cyclonic manner, loss of entropy during direction change, etc.. Examples in support thereof may be found in, for example, Stiefel, Col. 3 Lines 50-55,

14.

As a result of this arrangement in accordance with 50 the invention, the circulation of the cold and warm zones in the water space of the vessel 14 is considerably faster, so that an optimum mixing of condensate and steam is achieved. The cold water/warm water circulation of vessel 14 is illustrated by the arrows 20 in FIG. 55

1.

Schweiger Col. 2 lines 60+

65 The nozzles which may be trumpet-shaped and diverge in the direction of flow, are preferably oriented obliquely upwards. Furthermore, the container preferably has a wall of approximately truncated conical shape,

Larsen Col. 3 Lines 1-5



3

5,122,

In addition eight vertical tubes 7 branch off from each horizontal tube 6 with each vertical tube 7 extending upwardly to a unit 8 consisting of a vertically disposed nozzle 9 and a baffle plate 10 (see FIG. 3).

CLEARLY it has been KNOWN to one of ordinary skill in the art for over 20 years to point/direct the effluent end (nozzles) of a pipe towards the surface of a liquid in which it is immersed. Accordingly it would be obvious to utilize such teachings and apply them in the manner set forth in section 8b of said previous Office action.

5. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on

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obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In the instant case, Garabedian Col 6, lines 11-15:

10 tanks 12.

**As stated above, the termination end 22 of each
downcomer line 14 is cut at a 45° angle. This configura-
tion has been shown to eliminate major hydrodynamic
pressure disturbances due to a chugging type of steam
15 condensation.**

clearly sets forth that it is old and well known (1991) to cut the effluent end of a pipe submerged in liquid to "eliminate major hydrodynamic pressure disturbances."

Accordingly, at the time of the invention it would have been obvious to one of ordinary skill in the art to utilize such teachings.

The Examiner would like to point out that although specific references disclosing motivations and detailed drawings have been applied to the claims, one may also resort to the following exercise to further show how obvious it is to cut the end of a pipe in the same manner as applicant AND to angle the direction of the pipe within the fluid. If one were to take a glass of milk and a straw and point the straw straight down into the milk and blow until bubbles come out the end of the straw, then one could measure how much effort it would take to get one bubble out of the straw at a time. Tilt the straw towards the other side of the glass so that the end is no longer perpendicular and it takes less effort

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to blow the bubbles. Cutting the end of the straw at an angle (like the “slushy” spoons at convenience stores) will also prove to require even less effort to create a bubble as well as creating smaller bubbles. This phenomenon has to do with the surface tension of the milk (or any other liquid) and the “air” pocket (bubble) trying to move into (displace) it before leaving the end of the straw. When the straw is tilted, there is one part of the end of the straw that is closer to the top (surface of the liquid) than the other. This changes the geometry of the physical forces trying to keep the air within the straw (or prevent the air from entering the liquid). The uppermost part of the straw presents a smaller surface area to the milk/bubble interface and therefore it takes less effort to push the air from the straw thus creating bubbles. This is of course an overly simplified discussion that does not take into account other forces and effects regarding the depth of the liquid, pressure gradients or other forces including turbulence, temperature, etc. but is merely another way to show how obvious it is to angle the effluent end of a pipe into a pool of liquid.

6. Applicant argues on page 11:

“it appears claims 3 and 4 contain allowable subject matter”

Response:

The Examiner clearly rejected claims 3 and 4 in section 9 of the previous Office action over Krebs in view of Garabedian AS APPLIED TO CLAIMS 1 AND 5 ABOVE and further in view of.... Accordingly the FULL rejection of Krebs as applied to claims 1 and 5 is brought into effect in rejecting claims 3 and 4. The Examiner sustains said

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rejection and for applicants convenience has written out the entire unabbreviated rejection below.

Claim Rejections - 35 USC § 103

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. **Claims 1, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krebs Figure 4 in view of U.S. Patent 4,986,956 to Garabedian and further in view of any of Nissel German 2618108A1, JP0000550319AA to Itoya et al., or U.S. Patents 4,304,198 to Stiefel, 4,801,424 to Schweiger, or 5,122,333 to Larsen for the reasons set forth in section 8 of the previous office action mailed 4/4/2008.**

See the discussion set forth in sections 4 and 5 above.

9. **Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krebs Figure 4 in view of U.S. Patent 4,986,956 to Garabedian and further in view of any of Nissel German 2618108A1, JP0000550319AA to Itoya et al., or U.S. Patents 4,304,198 to Stiefel, 4,801,424 to Schweiger, or 5,122,333 to Larsen as applied to claims 1 and 5 above and further in view of either Introduction to Fluid Mechanics second edition to John et al. or Piping Handbook Seventh edition to Nayyer for the reasons set forth in section 9 of the previous office action mailed 4/4/2008.**

See the discussion set forth in section 6 above.

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Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL L. GREENE whose telephone number is (571)272-6876. The examiner can normally be reached on Mon-Thur.

12. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James P. Trammell can be reached on (571) 272-6712. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. L. G./

Examiner, Art Unit 3694

2008-10-26

/James P Trammell/

Supervisory Patent Examiner, Art Unit 3694